

A New Doridid Nudibranch from Torquay, Victoria

by

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(Plate 15)

The genus Glossodoris Ehrenberg, 1831, is already represented in Victorian waters by five species (Burn, 1957, pp. 16-18). The new species described below differs in colouring from all of these species with one exception but can be separated from that species, G. haliclona Burn (loc. cit., p. 17), by the very different shape of its radular teeth.

According to Odhner (1957) the generic name Glossodoris should not be used, as the type species G. xantholeuca Ehrenberg, 1831, has never been anatomically examined. In place of Glossodoris Odhner proposed to use two names, based upon the rather simple division of the species assigned to the genus according to the shape of the radular teeth. For those species with the teeth hamate and denticulate, he proposed to use Chromodoris Alder and Hancock, 1855; and for those species which have tri- and bi-cuspid teeth he proposed to use the genus Hypselodoris Stimpson, 1855. However, until the question of the anatomy and radula are satisfactorily known in the type of Glossodoris with the probability of one of Odhner's suggested genera becoming a synonym, I prefer to use the older generic name.

Glossodoris arbuta BURN, spec. nov.

(Plate 15, Figures 1 and 2)

The single specimen (holotype) measured alive 22 mm. long and 5 mm. broad. Along either lateral margin of the mantle there are four or five deep indentations, each corresponding to a colour patch on the dorsal surface. The mantle is very little wider than the foot. The foot is grooved for its full length, anteriorly the lateral corners are expanded and form sharp corners, posteriorly the tail is narrow and rounded. The oral tentacles are short and digitiform. The rhinophores have 12 lamellae.

The branchiae number 12 simple plumes, they encircle the white-rimmed anus.

The radular formula is 24 x 40.0.40. The teeth are all simply hamate, the cusp of each is unequally bifid. Except for the marginals each tooth has a longer basal plate than cusp.

The body colour is bright pink of a nearly strawberry hue, the rhinophores and branchiae are transparent pale red. The foot is outlined with a row of obscure white dots. About each indentation of the mantle margin is a large rounded patch of yellow; in the midst of these patches is a small number of minute bright red flecks.

Type locality: Point Danger, Torquay, Victoria. Long. 144° 19' East, lat. 38° 20' South. (1 specimen, 30 March, 1959, collected by the writer.) It was found crawling on brown seaweed at extreme low tide level.

The specific name *arbutus* has been chosen in allusion to the wild strawberry tree or *Arbutus* tree, the colour of which is present on the new species.

Remarks: Three or four pink coloured species of Glossodoris are recorded from the Australasian region, and the new one must be compared with each of them. The Victorian G. haliclona Burn, 1957 (p. 17) does not have the marginal yellow patches on the mantle, the radula has half as many rows of teeth, and the teeth are denticulate instead of bifid as in the present species. The South Australian G. epicuria (Basedow and Hedley, 1905 [p. 153, pl. 7, figs. 1-3]), is larger, has five branchiae as compared with 12 in G. arbuta, the rhinophores carry more lamellae, the foot corners and oral tentacles extend beyond the anterior mantle, and the radular formula is smaller according to the original description while the individual teeth are denticulate. It is probable that the

Glossodoris sp. of Allan, 1947 (p. 445) is synonymous with *Chromodoris* (= *Glossodoris*) *australis* Risbec, 1928 (p. 143, pl. 7, fig. 8), but as the description of the former is inadequate and lacks any mention of the radula, the two must be maintained as separate species. As both species have darker red spotting on the mantle and the latter has denticulate radular teeth, neither can be identified with *G. arbuta*.

According to the arguments of Odhner (1957, p. 252), *Glossodoris arbuta* would be classified as a *Hypselodoris*.

The holotype has been presented to the National Museum of Victoria, Melbourne, where it is registered as F 21,272.

The radulae of the three following Victorian species of *Glossodoris* have been examined for comparison with *G. arbuta*. As none of these have previously been fully described or figured from Victorian material, the discrepancies are here made good.

Glossodoris victoriae Burn, 1957 (p. 16) Plate 15, figure 3. The radular formula is 36 x 37.0.37. The first lateral is narrow and denticulate on each side of the cusp, one denticle is on the median side and four denticles on the marginal side. The subsequent teeth have five denticles on the marginal side. This species is referable to *Chromodoris* according to the arguments of Odhner (1957, p. 252).

Glossodoris tasmaniensis (Bergh, 1905), (Burn, 1957, p. 17) Plate 15, figure 4. The radular formula is 48 x 40.0.40. The first lateral is very broad, the cusp has two denticles on the median side and three on the marginal side. The subsequent teeth each have three denticles on the marginal side, the marginal teeth have one or two denticles whilst the outermost tooth appears to be bifid at the tip. The exceptionally broad first lateral tooth is a little separated from its neighbour, and for these conditions, i. e., broad lateral tooth and separation from other teeth in half row of radula, the genus *Noumea* Risbec (1928, p. 165) was proposed. In every other way the teeth are typical of *Chrom-*

odoris (Odhner, 1957, p. 252). Pruvot-Fol (1951, p. 147) gives the radular formula of *G. tasmaniensis* as 50 x 150 (= 50 x 75.0.75), which is considerably more teeth per half row than in the present material.

Glossodoris haliclona Burn, 1957 (p. 17) Plate 15, figure 5. The radular formula is 12 x 30.0.30. The first lateral is denticulate on both sides, the median side has one denticle and the marginal side, five. The subsequent teeth each have five denticles, that nearest the tip of the cusp is largest and is more like a bifurcation of the cusp than a denticle. The marginal teeth are small and dumpy, each with five denticles. The elements of the labial disk are shallowly curved with one end bifid. This radula approaches closest to *G. hilaris* (Bergh) as figured by Baba (1953, p. 210, fig. 6J), although the labial elements are very dissimilar. As with the previous two species, this one is referable to *Chromodoris* (Odhner, 1957, p. 252).

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Explanation of Plate 15

Figure 1: *Glossodoris arbuta* BURN, spec. nov. Dorsal view, x 4 $\frac{2}{3}$ Figure 2: Two radular teeth of the same [a - an inner lateral, b - a marginal tooth] Figure 3: *Glossodoris victoriae* BURN. A half row of radular teeth [a - inner lateral, b - side view of a lateral tooth, c - near marginal tooth, d - marginal tooth] Figure 4: *Glossodoris tasmaniensis* (BERGH). A half row of radular teeth [a - inner lateral, b - side view of a lateral, c - near marginal, d - marginal tooth] Figure 5: *Glossodoris haliclona* BURN. A half row of radular teeth and a labial element [a - labial element, b - side view of inner lateral, c - side view of lateral, d - side view of marginal tooth]